# Piyush Gautam

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## My Education

**IIT Kharagpur**                                                                                          West Bengal
M.Tech/B.Tech Dual Degree Engineering Product Design *GPA: 8.1*                      July 2019 - May 2024

**Sri Chaitanya**                                                                                              Hyderabad
Secondary Education Science *GPA: 96%*                                                   April 2017 - May 2019

## My Internship Experiences

**Flamapp**                                                                                            Bengaluru, India
*Software Engineer*                                                                                 Jan 2023 - Present

- Created database on amazon s3, for training a VIT for image recognition(augmentations, refining, triplet formation, etc.)
- Worked on creating a avatar creation tool with features like body type selection, clothes selection, texture selection, body shape modifications., and various other cool features.
- Integrated stable diffusion to the avatar system for creating textures on the go. Also deployed model on Amazon ECS..
- Key Takeaways: Blender, Unity3D, Godot, AWS: S3, Lambda, EC2, ECS, Sagemaker

**Flamapp**                                                                                             Bengaluru India
*Computer Vision Engineer*                                                                   Jan 2022 - June 2022

- Worked on creating a cloud image recognition architecture that scans an image in from live camera and searches it in the database (containing over 100 million images) in seconds, and then augments a corresponding video over that image in the scanner application. This is similar to Vuforia in Unity3D
- Created a pattern generation algorithm containing n different shapes based on user input. Also worked on creating a custom scannable code like qr code,snaptag,etc.
- Key Takeaways: Deep Learning, Computer Vision, C++ architecture, CUDA for model training, Cmake, Python libraries including OpenCV, Pillow, Scikit-learn, etc.

**Computer Graphics Lab IITKGP**                                                                IIT Kharagpur
*Game Developer (Unity3D)*                                                                   Sep 2019 - Apr 2020

- Developed games for computer graphics lab and published them on Google Play Store. Used Unity 3D game engine and developed platformer and 3D games.
- Developed a 2D platformer game using Unity 2D engine, with asset designing using Adobe Illustrator and game coding using C#. Also developed a 3D game using simple free body dynamics and low-poly world design with baked lighting for performance optimization.

## My Skill Set

| | |
|---|---|
| Programming Languages: | C/C++, C#, HTML/CSS/JS, Python |
| Machine Learning: | Image Transformers, GANs, CNNs, NLP, Diffusers |
| Full Stack Web Developement: | ExpressJs, ReactJs, NodeJs, NextJs, Flask, Django, MongoDb, PostgreSQL, ThreeJs |
| Design: | Adobe Photshop, Blender, Adobe Illustrator, Figma, Spline |
| Game Developement: | Unity3D, Godot |

## My Projects

**RShifts WebApp** *mern stack, firebase*                                   https://rshifts-testweb.vercel.app/
A full stack website with various functionalities such as user login/signup, user dashboard, subscription and much more. Designed the website using Figma keeping UI/UX rules in mind. Used Firebase for authentication and ExpressJs, Mongodb to maintain user database .

**OpenAI Gym** *Stable baselines, Nes_py, Python*                   https://github.com/piyushgIITian/ML_Projects
Trained Proximal Policy Optimization model to play super mario bros. Used stable baselines for PPO and gym for super mario python environment. Results: After 10,000 trials my model was able to complete first level.

## My Achievements

Stood top 2% amongst, 200k students that appeared in JEE Advanced 2019 [AIR 4558]

Received Gold Medals in National Science Olympiad 2017 and 2015 and International Mathematical Olympiad 2017